Day 329 **A Tier 10-a-day**

1 A mechanic charges £35 plus £40 for each hour of work.
(a) Write a formula for the total cost, £C, after t hours.
(b) Raj pays £475 in total. Work out the number of hours.

2 Here are the results for 29 students.
(a) Find the median.
(b) Work out the range.

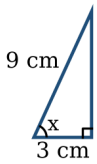
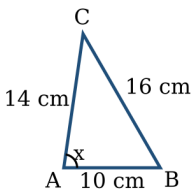
Shoe size	3	4	5	6	7
Frequency	2	9	5	6	7

3 Solve the simultaneous equations
$2x - 4y = -18$
$3x + 4y = 33$

4 The stem and leaf diagram shows the ages of 15 people.
Key: 2 | 0 represents 20 years
(a) Work out the median age.
(b) Work out the interquartile range.

Stem	Leaf
2	0
3	0 1 3 4 7 8
4	0 3 6
5	0 1 4 8 9

5 Here are the first five terms of a quadratic sequence.
2, 5, 6, 5, 2
(a) Find an expression for the nth term.
(b) Work out the 10th term.

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6 Solve $4^x = \frac{1}{4}$	
7 Work out the size of angle x. (Calculator) Give your answer to 1 decimal place. The diagram is not drawn accurately.  	
8 The value of a car falls by 20% each year. (Calculator) After 3 years it is worth £19,712. Work out its value at the start.	
9 Work out the size of angle x. (Calculator) Give your answer to 1 decimal place. The diagram is not drawn accurately.  	
10 A television costs £500 plus VAT at 20%. In a sale, the price including VAT is reduced by 25%. Work out the sale price of the television.	